

RESEARCH ARTICLE

Prevalence and Trends of Transfusion-Transmissible Viral Infections among Blood Donors in South of Iran: An Eleven-Year Retrospective Study

Fatemeh Farshadpour^{1,2}, Reza Taherkhani^{1,2*}, Saeed Tajbakhsh^{1,2}, Marziyeh Gholizadeh Tangestani¹, Gholamreza Hajiani³, Nasrin Sharifi⁴, Sakineh Taherkhani⁵, Abdolreza Nejadbolkehr³



1 Department of Microbiology and Parasitology, School of Medicine, Bushehr University of Medical Sciences, Bushehr, Iran, **2** Persian Gulf Tropical Medicine Research Center, Bushehr University of Medical Sciences, Bushehr, Iran, **3** Bushehr Blood Transfusion Organization, Bushehr, Iran, **4** Research Center for Biochemistry and Nutrition in Metabolic Diseases, Kashan University of Medical Sciences, Kashan, Iran, **5** Reproductive Health and Midwifery Department, School of Nursing and Midwifery, Shahrood University of Medical Sciences, Shahrood, Iran

* taherkhanireza2005@yahoo.com

OPEN ACCESS

Citation: Farshadpour F, Taherkhani R, Tajbakhsh S, Gholizadeh Tangestani M, Hajiani G, Sharifi N, et al. (2016) Prevalence and Trends of Transfusion-Transmissible Viral Infections among Blood Donors in South of Iran: An Eleven-Year Retrospective Study. PLoS ONE 11(6): e0157615. doi:10.1371/journal.pone.0157615

Editor: Richard Paul, Institut Pasteur, FRANCE

Received: April 19, 2016

Accepted: June 1, 2016

Published: June 16, 2016

Copyright: © 2016 Farshadpour et al. This is an open access article distributed under the terms of the [Creative Commons Attribution License](https://creativecommons.org/licenses/by/4.0/), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Data Availability Statement: All relevant data are within the paper.

Funding: This study was supported by the Deputy Research and Affairs of Bushehr University of Medical Sciences, Bushehr, Iran (grant no. 5919). The funder had no role in study design, data collection and analysis, decision to publish, or preparation of the manuscript.

Competing Interests: The authors have declared that no competing interests exist.

Abstract

Background

Blood transfusion is considered a potential risk factor for transmission of life-threatening viral infections, including HIV, HCV and HBV infections. This study was performed to find out the prevalence and trends of these infections among blood donors in Southern Iran.

Methods

The blood donor data recorded in twelve regional blood transfusion centers from 2004 to 2014 were analyzed in an anonymous way with respect to the results of serological screening for HBV, HCV, and HIV infections. Overall, 293454 donors were screened for viral infections.

Results

Most of the donors were male, married, aged between 20–40 years, educated, and regular donors. The overall seroprevalence rates of HBV, HCV and HIV were 0.15%, 0.1% and 0.004%, respectively. The highest seroprevalence was found for HBV, followed by HCV and HIV. These infections were more prevalent in male, low educated and first time donors. The highest HCV seroprevalence was observed among donors aged 20 to 40 years, while HBV seroprevalence increased with age. The seroprevalence rates of HBV and HCV from 2004 to 2014 showed significant decreasing trends from 0.460% to 0.060% ($P < 0.001$) and 0.329% to 0.045% ($P < 0.001$), respectively. Whereas HIV infection had a slight but not significant decline from 0.0173% in 2004 to 0.0028% in 2014 ($P = 0.087$).